

CHEM 116: HOMEWORK SHEET
HOURLY EXAM II (Fall 2011-Dr. Babb)

Chapter 12:

(5th McMurry/Fay Text)

- A. Determination of Rate Law ($\text{Rate} = k[\text{A}]^m[\text{B}]^n[\text{C}]^p \dots$) (pg. 446-451)

Other Homework: 12.4, 12.45, 12.46, 12.48
Chapter 16 (Problem Book) 1-5, 20, 21

- B. Zeroth, First and Second Order Reactions (pg. 451-461)

1. Integrated Form of Rate Law
2. Half-Life ($\tau_{1/2}$)

Graded Online Homework: 116-integrate

Other Homework: 12.6-12.11, 12.21, 12.22, 12.24, 12.50-12.64 (even)
Chapter 16 (Problem Book) 11-18

- C. Elementary Reactions & Reaction Mechanisms (pg. 461-470)

- D. Arrhenius Eqn. ($k = A \times \exp(-E_A/RT)$) (pg. 471-477)

- E. Catalysis (pg. 477-486)

Graded Online Homework: 116-mech

Other Homework: 12.12-12.1, 12.26, 12.28, 12.66-12.72 (even), 12.76-12.82 (even),
12.86, 12.88, 12.92, 12.94, 12.100

Chapter 13:

(5th McMurry/Fay Text)

- A. Chemical Equilibrium ($K = [\text{Products}]/[\text{Reactants}]$) (pg. 497-503, 528-531)

- B. K_c , K_p and Relationship of K_c to K_p (pg. 503-508)

Graded Online Homework: 116-introeq

Other Homework: 13.1-13.7, 13.23, 13.40, 13.42, 13.44, 13.48, 13.50, 13.56-13.66
(even), 13.90, 13.92, 13.94, 13.96

- C. Reaction Quotient Q_c , Conc. Problems and Quadratic Eqn. (pg. 508-516)

- D. Le Chatelier's Principle and Its Application (pg. 516-528)

Graded Online Homework: 116-lechat

Other Homework: 13.8-13.15; 13.28, 13.30, 13.32, 13.34, 13.52, 13.54, 13.68-13.78
(even), 13.98; 13.16-13.22, 13.36, 13.38, 13.80-13.88 (even), 13.106
Chapter 17 (Problem Book) 1-6, 8-24 even (do 8-24 odd if needed)

Chapter 14:

(5th McMurry/Fay Text)

- A. Acid/Base Theories and Strengths (pg. 543-549; 576-583)

Graded Online Homework: 116-acid

Other Homework: 14.1-14.5, 14.26-14.28, 14.32, 14.34, 14.38, 14.40, 14.44-14.50
(even), 14.102, 14.106, 14.108

- B. Dissociation of H_2O , pH, pOH, K_w ($\text{pH} = -\log[\text{H}^+]$, $\text{pOH} = -\log[\text{OH}^-]$) (pg. 549-554)

- C. pH of Solutions of Strong Acids and Bases (pg. 555-557)

Graded Online Homework: 116-pH

Other Homework: 14.6-14.11, 14.52-14.64 (even), 14.114
Chapter 18 (Problem Book) 11, 14, 15

NOTE: Exam II is Wednesday, Oct. 5 (in lab) and will cover most of the topics listed on this sheet. You are responsible for material covered in lecture, reading material in text and material covered in homework problems. **Please bring the following items to the exam: #2 pencil, non-programmable calculator, and photo ID.** Sample back tests can be found on the Chem 116 website at <http://www.as.wvu.edu/~mbabb>.